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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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PILLSBURY WINTHROP, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER	
BRANNOCK, MICHAEL T	
ART UNIT	PAPER NUMBER
1646	

DATE MAILED: 11/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/825,882	ADLER, JON ELLIOT	
	Examin r	Art Unit	
	Michael Brannock	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Peri d for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *20 August 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *138-157* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *138-157* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Status of Application: Claims and Amendments

Applicant is notified that the amendments put forth 8/20/03, have been entered in full.

Response to Amendment

Applicant is notified that any remaining rejection or objection that is not expressly maintained in this Office action has been withdrawn in view of Applicant's amendments.

Priority

As set forth previously Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the provisional application upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims requiring SEQ ID NO: 7 or 8. The prior application does not appear to disclose a polynucleotide corresponding to the instant SEQ ID NO: 7 or encoding a polypeptide of the instant SEQ ID NO: 8.

Applicant argues that support can be found in the prior Application. This argument has been fully considered but not deemed persuasive. Applicant is requested to pointed-out exactly where these sequences can be found.

Specification

As set forth previously, the disclosure is objected to because it contains an embedded hyperlink(s) and/or other form of browser-executable code, see page 37 for example. Applicant is required to delete all of the embedded hyperlinks and/or other form of browser-executable code. See MPEP § 608.01.

The amendment filed August 20, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: a polynucleotide of SEQ ID NO: 7 encoding a functional bitter taste receptor polypeptide, e.g. claim 138, see below.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

Claims 147 and 148 are objected to because of the following informalities: there are two claims listed as claim 147. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 138-140, 146 and 157 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 138-140 require that the nucleic acid hybridize under stringent conditions. The term "stringent conditions" is a relative term and encompasses conditions of varying degrees of stringency - such conditions determining the bounds of the claim. However, the art does not provide an unambiguous definition of the term "stringent conditions" and neither is such a definition given for the term in the specification which puts forth the metes and bounds of the

claim Applicant is seeking protection for. The term appears to be defined only by way of example at page 31.

Applicant argues that the amended limitation to require that the polynucleotide encoded a GPCR which functions as a bitter taste receptor is sufficient to define the bounds of the claim. This argument has been fully considered but not deemed persuasive. This limitation does not set forth what conditions are to be considered stringent, and which are not. It is again suggested that the claim recite the actual conditions that Applicant considers to be stringent, e.g., salt concentration and temperature conditions of incubations and washes.

Additionally, regarding claims 146 and 157, it is noted that Applicant's arguments regarding "indirect attachment" are persuasive.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 138-157 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims require polynucleotides of SEQ ID NO: 7 encoding a polypeptide of SEQ ID NO: 8 that is a functional bitter taste receptor, however neither the specification nor the claims as originally filed assert that SEQ ID NO: 8 is a functional bitter taste receptor. The specification puts forth the instant hT2R61 is a member of the T2R family of taste-cell-specific

GPCRs as described in Chandrashekar et al., Cell 100(703-711)2000; and that several of such family members are believed to involved in the taste detection of bitter substances but may be involved in other taste modalities as well, (see page 8, last full paragraph). However, the asserted membership of the instant polypeptide in the family of T2R proteins described by Chandrashekar et al., (supra) does not, alone, impart any property to the polypeptide, nor does such membership provide a reasonable expectation that the polypeptide is a bitter taste receptor. Chandrashekar et al. tested 11 different human T2R clones against a battery of different tastants and found only one clone that responded - and this response seems to be limited to only one tastant (see col 1 of page 707 and List of Tastants at page 710). Further, even this success seems to be rare in the art. Commenting on this family of receptors, other researchers have concluded that although T2R receptors have been suggested to be candidates for bitter taste receptors, "at present there is no functional evidence for this proposal", see Lindemann, B. *Nature Neuroscience* 3(2)99-100, 2000, last paragraph of column 2 of page 99. Thus, the specification does not reasonably convey to the skilled artisan that the inventors were in possession a polypeptide of SEQ ID NO: 8 that is functional as a bitter taste receptor, and nor is such asserted in the specification as filed.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

New claims 138-157 are rejected under 35 U.S.C. § 101, as applied previously to clams 1-22, 26-53, 78-80, 82-84, 125-133, because the claimed invention is not supported by either a

specific and substantial asserted utility or a well-established utility, for the reasons of record, which are reiterated below and recast in view of Applicant's amendments.

The claims now require that the polypeptide be a functional bitter taste receptor, yet the specification has not taught how to use this information in any particular way. The concept of "bitter taste" is known to involve multiple and as yet poorly characterized transduction schemes, see for example Perruccio and Kleinhaus, *Society for Neuroscience Abstracts* 26(1-2) Abstract No. 66.15, 2000. These transduction schemes are also thought to involve a large diversity of receptors – each receptor thought to bind specifically among a tremendous genus of structurally unrelated toxic or bitter tasting compounds, see the Abstract of Chandrashekar et al., Cell 100(703-711)2000 for example. The specification has given no indication as to which of these compounds is expected to bind to and activate SEQ ID NO: 8. Without such knowledge, the artisan could not use the protein to manipulate any aspect of the senses involving taste. Instead, the specification has merely invited the skilled artisan to embark on a plan of research to try to find exactly what ligands to use and then to determine what the protein can be used for. Thus, even as amended, the claims are not supported by a substantial utility.

As discussed previously, the claims are directed to polynucleotides of SEQ ID NO: 7 encoding a polypeptide of SEQ ID NO: 8 termed hT2R61, wherein the polypeptide is believed to be a component of a taste transduction pathway, particularly bitter taste transduction (page 8). The specification puts forth the instant hT2R61 is a member of the T2R family of taste-cell-specific GPCRs as described in Chandrashekar et al., Cell 100(703-711)2000; and that such family members are believed to involved in the taste detection of bitter substances but may be involved in other taste modalities as well, (see page 8, last full paragraph). The instant

specification puts forth that the polypeptides are useful for "representing the perception of taste and/or for predicting the perception of taste in a mammal" (e.g. pg 67), although the specification does not appear to assert that the instant polypeptide mediates a response to any particular tastant or ligand. The specification suggests that the nucleic acids and the proteins they encode can be used as probes to dissect taste-induced behaviors (e.g. see page 6). Further, the specification indicates that the polypeptides can be used in a screening method to determine what molecules may activate or inhibit the polypeptides (see pages 9 and 50) and also to determine what the physiological effects of the polypeptides might be - the effects being those on "taste modulation". These proposed uses lack a substantial utility, because each of the proposed uses are of a general nature, and it would require undue experimentation on the part of the skilled artisan to determine what, particularly, the claimed polynucleotides could be used for.

A substantial utility is a practical use which amounts to more than a starting point for further research and investigation and does not require or constitute carrying out further research to identify or reasonably confirm what the practical use might ultimately be. For example, an assay that measures the presence of a material which has a stated correlation to a predisposition to the onset of a particular disease would be a practical use of the material. However, a method of modulating an unidentified aspect of what is collectively known as taste perception with an as yet unidentified material (e.g. agonists of the disclosed polypeptides) would not constitute a substantial utility. Basic research, such as studying the properties of the claimed product or the mechanisms in which the product is involved, does not constitute a substantial utility.

A stated belief that a correlation exists between the polypeptides and any of the collective phenomena that are encompassed by the concept of taste perception is not sufficient

guidance to use the claimed polynucleotides to modulate any aspect of taste perception; it merely defines a starting point for further research and investigation and presents only an invitation to one of skill in the art to perform such further research and investigation. The molecular mechanisms of taste perception are extremely complex and are known to use multiple transduction mechanisms. Even what could be termed a singular modality of taste perception, e.g. the perception of bitter taste, is known to involve multiple and as yet poorly characterized transduction schemes, see for example Perruccio and Kleinhaus, *Society for Neuroscience Abstracts* 26(1-2) Abstract No. 66.15, 2000. Thus, Applicants' asserted uses of the polynucleotides as they relate to taste perception, are general and do not assert any particular use beyond an invitation to the skilled artisan to try to find a particular way in which the polynucleotides or polypeptides could be used.

Further, the asserted membership of the instant polypeptide in the family of T2R proteins described by Chandrashekar et al., (supra) does not, alone, impart a property to the polypeptide that could be exploited in such a way as to constitute a substantial utility. Chandrashekar et al. tested 11 different human T2R clones against a battery of different tastants and found only one clone that responded - and this response seems to be limited to only one tastant (see col 1 of page 707 and List of Tastants at page 710). Further, even this success seems to be rare in the art. Commenting on this family of receptors, other researchers have concluded that although T2R receptors have been suggested to be candidates for bitter taste receptors, "at present there is no functional evidence for this proposal", see Lindemann, B. *Nature Neuroscience* 3(2)99-100, 2000, last paragraph of column 2 of page 99. Applicant's disclosure simply offers an additional object for the skilled artisan to examine. Although Applicant's disclosure would be immediately

recognized as presenting an exciting research opportunity, a product whose only asserted utility is as an object of such research is not patentable under 35 U.S.C. 101.

The specification puts forth that the polypeptides of the instant invention are specifically expressed in taste cells and that the polynucleotides could thus be used to generate taste topographic maps or to dissect taste transduction pathways (e.g. page 68-70). These proposed uses lack a substantial utility. Almost every polynucleotide and polypeptide has some tissue specific pattern of expression, and absent knowledge of any ligands to the disclosed polypeptides, or without some specific or particular guidance as to which "taste transduction pathway" the polypeptides are involved in, these uses are merely and invitation to perform further research into the properties of the disclosed polypeptides and polynucleotides or to try to find practical uses for them.

The specification puts forth that the polypeptide and/or polynucleotides could be used in forensic biology (page 69). While one of skill in the art would appreciate that polymorphisms in the disclosed sequences must exist in any large population, this amounts to nothing more than an invitation to the skilled artisan to try and find such polymorphisms. Moreover, the specification does not teach that any particular nucleic acid or amino acid sequence is distinctive of any individual nor of any particular phenotype.

Thus, the instant application has failed to provide guidance as to how one of skill in the art could use the claimed invention in a way that constitutes a substantial utility. The proposed uses of the claimed invention are simply starting points for further research and investigation into potential practical uses of the claimed nucleic acids.

Applicant's arguments regarding membership in the class of T2R proteins as well as the assertions in the specification have been substantially addressed in the body of the rejection. Additionally, Applicant urges that it would be well within the purview of the artisan to test to see if the T2R61 polypeptide binds to and is activated bitter ligands that are known in the art. This argument has been fully considered but not deemed persuasive for two reasons. First, a substantial utility is a practical use which amounts to more than a starting point for further research and investigation and does not require or constitute carrying out further research to identify or reasonably confirm what the practical use might ultimately be. An invitation to try to find a ligand for the receptor is does not constitute a substantial utility. Second, the methods of screening are not known in the art to be a straight-forward matter. As set forth previously, Chandrashekar et al. tested 11 different human T2R clones against a battery of different tastants and found only one clone that responded - and this response seems to be limited to only one tastant (see col 1 of page 707 and List of Tastants at page 710). Further, even this success seems to be rare in the art. Commenting on this family of receptors, other researchers have concluded that although T2R receptors have been suggested to be candidates for bitter taste receptors, "at present there is no functional evidence for this proposal", see Lindemann, B. *Nature Neuroscience* 3(2)99-100, 2000, last paragraph of column 2 of page 99. Applicant's disclosure simply offers an additional object for the skilled artisan to examine.

Applicant argues that several post-filing date references establish a role for certain T2R proteins in bitter taste transduction. This argument has been fully considered but not deemed persuasive. The invitation to perform the type of research as described in these references, to try to find a bitter taste receptor, does not constitute a patentable utility.

Applicant's argues that Applicant's own subsequent research indicates that the polypeptide of SEQ ID NO: 8 is activated by two known bitter tastants, e.g. 6-nitrososucchruin and 3gy-dihydro-isoquinolin-1onc. This argument has been fully considered but not deemed persuasive. There is not mention in the specification that SEQ ID NO: 8 is activated by these ligands; these ligands do not appear to be mentioned at all. And nor could such specific information be predicted based on the teachings of the specification and the state of the art at the time of filing.

Claims 138-157 are also rejected under 35 U.S.C. § 112 first paragraph, as set forth previously regarding claims 1-22, 26-53, 78-80, 82-84, 125-133. Specifically, since the claimed invention is not supported by a substantial asserted utility, for the reasons set forth above, one skilled in the art would not know how to use the claimed invention so that it would operate as intended without undue experimentation.

Applicants' arguments regarding the 35 U.S.C. § 112 rejection as the corollary of the 35 U.S.C. § 101 rejection have been addressed above.

Additionally, as set fourth previously, should Applicant establish a substantial utility for the claimed polynucleotides, claims 138, 141-157 encompass polynucleotides encoding polypeptide variants of the polypeptide of SEQ ID NO: 8 i.e. substitutions, deletions or insertions in a protein corresponding to SEQ ID NO: 8 or comprising only portions of SEQ ID NO: 8 Applicant has not provided sufficient guidance as to how to make and use the encoded polypeptides which are not 100% identical to the polypeptide of SEQ ID NO: 8, but which still

retain a desired property of the polypeptide of SEQ ID NO: 8, as set forth previously and partially reiterated below.

The specification has failed to teach one of skill in the art which amino acid substitutions, deletions or insertions to make. Furthermore, Applicant has not provided guidance as to what properties of the allelic variants or sequence variants of the protein corresponding to SEQ ID NO: 4 might be desired nor any guidance as to which amino acid substitutions, deletions or insertions to make to achieve any desired property. Applicant has not defined a difference in structure or difference in function between the protein corresponding to SEQ ID NO: 8 and variants of said protein. If a variant of the protein corresponding to SEQ ID NO: 8 is to have a structure and function similar to the protein corresponding to SEQ ID NO: 8, then the specification has failed to teach one of skill in the art which amino acid substitutions, deletions or insertions to make that will preserve the structure and function of the protein corresponding to SEQ ID NO: 8.

The specification has failed to provide an activity of SEQ ID NO: 8 to be used to evaluate the claimed variants for usefulness. The specification has not provided a working example of a usable variant of the polypeptide of SEQ ID NO: 8 nor sufficient guidance so as to enable one of skill in the art to make such a variant.. Specifically, since the claimed invention is not supported by a substantial asserted utility, for the reasons set forth above, one skilled in the art would not know how to use the claimed invention so that it would operate as intended without undue experimentation.

The specification has failed to provide an activity of SEQ ID NO: 8 to be used to evaluate the claimed variants for usefulness, e.g. no particular ligand has been disclosed to bind and

activate the protein, so the artisan would not know how to test variants for functionality. The specification has not provided a working example of a usable variant of the polypeptide of SEQ ID NO: 8 nor sufficient guidance so as to enable one of skill in the art to make such a variant.

Applicant argues that the specification provides guidance as to functional assays and expression systems, e.g. in HEK cells, that have been proven to work as required to identify whether or not a bitter taste receptor is functional. This argument has been fully considered but not deemed persuasive. One would still need to first identify a ligand for the receptor in order to determine if the protein was functional and also to test a variant of it; the specification has merely presented the artisan with an invitation to begin this extensive and essentially random trial and error experimentation. Most importantly, however, the issue remains that the specification has not taught which amino acid substitutions, deletions or insertions to make to achieve or preserve any desired property, and nor has the specification taught how to use a variant with no particular desired property. Applicant does not appear to have addressed this aspect of the rejection.

Claims 138, 141-157 are rejected under 35 U.S.C. 112, first paragraph, as set forth previously regarding claims 1-22, 26-45, 47-53, 78-80, 82-84, 125-133, i.e. as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification discloses a cDNA polynucleotide of SEQ ID NO: 7, yet the claims encompass polynucleotides not described in the specification, e.g. mutated sequences, allelic

variants, or sequences that have a recited degree of identity. None of these sequences meet the written description provision of 35 U.S.C. 112, first paragraph. Although one of skill in the art would reasonably predict that these sequences exist, one would not be able make useful predictions as to the nucleotide positions or identities of those sequences based on the information disclosed in the specification.

The instant disclosure of a single polynucleotide, that of SEQ ID NO: 7, encoding a polypeptide with no instantly disclosed specific activities, does not adequately support the scope of the claimed genus, which encompasses a substantial variety of subgenera. A genus claim may be supported by a representative number of species as set forth in *Regents of the University of California v Eli Lilly & Co,* 119F3d 1559, 1569, 43 USPQ2d 1398, 1406 (Fed. Cir. 1997). A description of a genus of cDNAs may be achieved by means of a recitation of a representative number of cDNAs, defined by nucleotide sequence, falling within the scope of the genus, or of a recitation of structural features common to the genus, which features constitute a substantial portion of the genus. The instant specification discloses, however, a single isolated polynucleotide sequence SEQ ID NO: 7, which is not sufficient to describe the essentially limitless genera encompassed by the claims.

The specification has not provided a particular essential feature, either a functional or structural feature, that the claimed genus of polynucleotides possess. The recitation of the property of hybridization does not, alone, provide sufficient information regarding the structure of the claimed polynucleotide variants. Further, most of these variants are expected to encode polypeptides having an amino acid sequence different than that of SEQ ID NO: 8 and thus having different structural and functional properties. Similarly, the recitation of a percent

identity to SEQ ID NO: 8 provides no description of any amino acid sequence other that of SEQ ID NO: 8. The specification has not defined what particular common structural or functional properties are possessed by the claimed genus of polynucleotides. Thus one of skill in the art would appreciate that Applicant was not in possession of the claimed genus of polynucleotides at the time of filing.

The instant claims are not directed to that which is disclosed as essential to the invention, i.e. something that is homologous to the parent SEQ ID NO: 7 and has the function of the parent polynucleotide. Thus, with the exception of the of the polynucleotide of SEQ ID NO: 7, and other polynucleotides which encode a polypeptide of SEQ ID NO: 8, the skilled artisan cannot envision encompassed variants. Therefore, only a polynucleotides encoding a polypeptide of SEQ ID NO: 8, and polynucleotides *consisting* of fragments thereof, or polynucleotides consisting of fragments thereof and heterologous sequences (e.g. carrier or tag sequences), but not the full breadth of the claims meet the written description provision of 35 U.S.C. §112, first paragraph.

Applicant's arguments have been substantially addressed in the body of this rejection and of that above regarding the issue of new matter.

Conclusion

No claims are allowable.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Please note the new official fax number below:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Brannock, Ph.D., whose telephone number is (703) 306-5876. The examiner can normally be reached on Mondays through Thursdays from 8:00 a.m. to 5:30 p.m. The examiner can also normally be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler, Ph.D., can be reached at (703) 308-6564.

Official papers filed by fax should be directed to (703) 872-9306. Faxed draft or informal communications with the examiner should be directed to (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

MB

November 3, 2003

YVONNE EYLER, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600